

- Power Breaker -

Circuit Protection
Consumer Units & Socket RCDs



Welcome to the PowerBreaker range of circuit protection products.

As an established manufacturer of circuit protection products, PowerBreaker has been providing safe and quality installations for over 70 years.

We have successful relationships as a preferred supplier to national chains of electrical wholesalers and buying groups across the UK and export regions, and we are a clear choice for your installation.

All PowerBreaker products are manufactured to the highest quality and independently tested to give our customers peace of mind that their installation will protect their customers.

We pride ourselves on keeping up with the latest technology and practices by working closely with multiple organisations with regards to electrical safety standards, ethics and environmental policies.

We have a team of technical experts on hand to help with any enquiries you may have regarding our products, their application and your project.



-PowerBreaker-

PowerBreaker

... creating a
sustainable future

PowerBreaker and the environment

We are strongly committed to environmental sustainability and our responsibility to protect and preserve the planet for future generations.

We integrate sustainability considerations into the design, manufacturing, printing and delivery of our products and aim to offer environmentally responsible choices to our customers by promoting the responsible use and disposal of our products and packaging.

Responsible Sourcing

We are working with our partner SEDEX to collaborate with suppliers who share our commitment to environmental sustainability.

We prioritize suppliers that adhere to ethical and eco-friendly practices, ensuring that our supply chain operates with the utmost social and ethical responsibility.

Continuous Improvement

We are dedicated to continuous improvement in our environmental performance. We set ambitious targets, regularly monitor our progress, and actively seek opportunities to innovate and enhance our sustainability initiatives.

We are members of the ECO VADIS sustainability programme to ensure we are delivering on our promises and making sure we improve year on year.

Through our environmental sustainability efforts, we aim to make a positive impact on the environment while inspiring others to join us in creating a more sustainable future.

Sedex Member

ecovadis

B2B
compliance

UK
CA

-PowerBreaker-

... quality & testing
are key

PowerBreaker - quality and testing

We work hard to ensure our products and processes are the best they can be. GreenBrook (the manufacturer of the PowerBreaker brand) is registered with multiple associations so you can be sure of our commitment to offering the best products and service we can.

- ISO9001-2015 Accredited which means we are regularly, independently audited for our quality, operations and codes of practice.
- UKCA compliant.
- Commercial Associate of the Electrical Contractors Association. ECA is the UK's leading trade association for the electrotechnical and wider engineering services industry aiming to drive growth and prosperity for the industry and their member organisations.
- Affiliated Manufacturer to the Electrical Distributors Association. The EDA is the trade association that represents the interests of wholesale distributors of electro-technical products in the UK. Wholesaler members include national networks with hundreds of branches through to single branch operations. Their membership covers 2,000 outlets throughout England, Scotland, Wales and Northern Ireland and, increasingly, these offer online B-2-B services, from which they generate a combined annual turnover of around £4.2 billion.
- Members of BEAMA who provide leadership expertise and independent influence in the areas of product safety, performance, energy efficiency and sustainability.

As members of BEAMA we benefit from the organisation's considerable influence on UK and European policy; BEAMA has very broad experience in manufacturer representation with particular emphasis on product legislation, standards and market surveillance.

PowerBreaker products are manufactured in accordance with the latest standards and independently tested and certified by Intertek Test Laboratories.



UK
CA



-PowerBreaker-

...used across
the world

PowerBreaker - a trusted brand

At PowerBreaker, we take great pride in providing high-quality products that have earned the trust of some of the world's most reputable blue chip companies.

Our dedication to excellence, innovation, and customer satisfaction has made us a preferred and trusted partner for industry-leading organisations.

Understanding the unique needs of our partners, we offer flexibility on products that can be adapted to fit specific requirements.

Our expert technical team work closely with clients to ensure our solutions perfectly align with their project requirements.

PowerBreaker circuit protection products have been used in blue chip installations across the world and we have been specified by customers such as ABB, Bombardier and Siemens.

Successful PowerBreaker projects include working with key contract sectors including:

- Airports
- Supermarkets
- Hospitals
- Underground stations (LUL Approved)
- Rail Projects
- Stadiums
- Restaurants
- Universities & Schools
- Housing Developments

PowerBreaker Digital Assets

Our full data specification and digital assets are available on EDATA, EPIM, Luckins & our own website www.greenbrook.co.uk

These resources are a data pool for manufacturers to share product information, including images and data sheets, with wholesalers, distributors and specifiers for multi channel distribution.

EDATA is an industry-owned resource of high quality, ecommerce-friendly, manufacturers' product data for customers to use in their web sites and digital business processes.

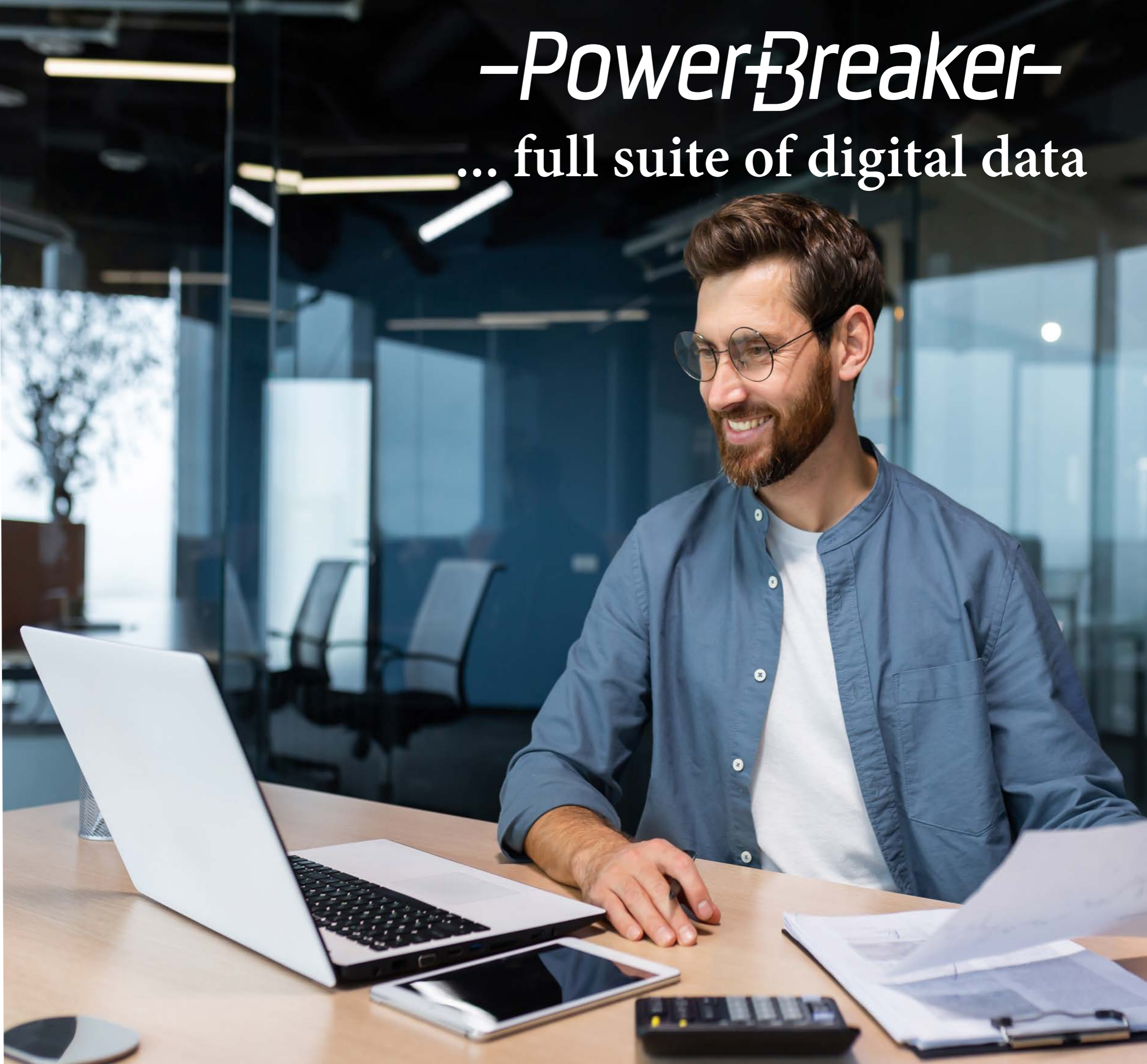
The information includes our master data, which is classified according to the international ETIM standard.

Product data is owned and managed by us, enabling it to be tracked and amended at source.

Data is independently monitored for quality, best practice and conformance with data standards.



-PowerBreaker- ... full suite of digital data



-PowerBreaker-

... designed for style
& peace of mind



PowerBreaker Design & Technology

The consumer unit is the most important electrical safety device in the home as it protects life from electric shock but it also protects against overloads which can result in electrical fires and damage to equipment.

We have designed a stylish, sleek looking unit with a flush lid that encompasses the very best technology to ensure the safety of our users and their belongings.

The PowerBreaker Range has:

Surge Protection -

Our SPD boards have built-in Type 2 surge protection devices which prevent over-voltages in electrical circuits that can potentially damage electronic equipment such as TV's, computers, washing machines, alarms etc.

Type A RCDs -

These detect pulsating DC residual currents in addition to the detection characteristics of Type AC RCDs. In modern households the goods connected to the consumer unit will be electronic equipment such as LED TVs, EV chargers etc which if at fault can cause a rush of DC current into the circuit and destroy the product.

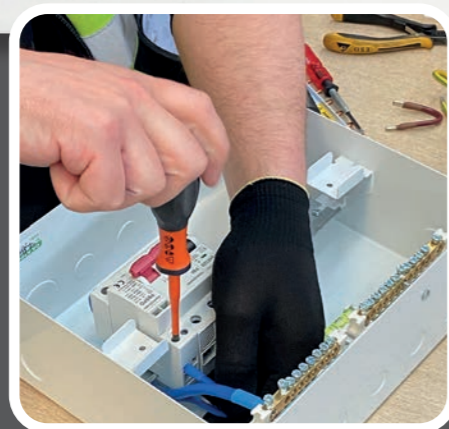
Arc Fault Detection Devices AFDDs -

These detect damaged cables and circuits and help to limit electrical fires.



-PowerBreaker-

... for your projects



Product Features

- Flush fitting lid
- Lockable lids available
- 18th Edition Compliant
- Stylish, functional metal enclosures
- Type 2 surge protection
- Increased cabling space
- Large clear knock-outs
- Type A RCDs and RCBOs
- AFDD (Type B and Type C Curve)
- High integrity Boards
- RAL 9003 powder-coated finish
- Third party type tested to BS EN 61439-3
- 6kA Rated (Short Circuit Capacity)
- 3 Year Guarantee

Bespoke PowerBreaker

- We offer a bespoke consumer unit design service that caters to the specific needs of our contractor projects
- Fully customisable to your project requirements
- Assembled in the UK by our team of skilled technicians to deliver a fast and reliable service
- Quick turnaround time
- Delivered direct to site
- Saves time on site - reducing labour cost
- Reduces the amount of stock on site

Consumer Unit with Main Switch

The Part Populated Consumer Unit range available in 8 Board layouts with and without SPD - 8/10/12/14/16/18/20/22 module units.

- 2P Mains Switch 100A
- 1 x Neutral for use with RCBO Module
- 6kA Rated Short Circuit Capacity
- Label kit
- Grommet Strip
- 2 x Blanking modules supplied per board
- Conforms to BS EN 61439-3
- 3 year Guarantee



Code	Description
PBPM08	8 Module (100A Mains Switch) 6 Usable Ways
PBPM10	10 Module (100A Mains Switch) 8 Usable Ways
PBPM12	12 Module (100A Mains Switch) 10 Usable Ways
PBPM14	14 Module (100A Mains Switch) 12 Usable Ways
PBPM16	16 Module (100A Mains Switch) 14 Usable Ways
PBPM18	18 Module (100A Mains Switch) 16 Usable Ways
PBPM20	20 Module (100A Mains Switch) 18 Usable Ways
PBPM22	22 Module (100A Mains Switch) 20 Usable Ways

Dual Consumer Unit with RCD and Main Switch

The Part Populated Consumer Unit range available in 5 Board layouts with and without SPD - 14/16/18/20/22 module units.

- 2P Main Switch 100A
- 2 x RCCB 80A (Board sizes 14/16/18)
- 2 x RCCB 100A (Board sizes 20/22)
- 3 x Neutral Bars
- 6kA Rated Short Circuit Capacity
- Label kit
- Grommet Strip
- Conforms to BS EN 61439-3
- 3 year Guarantee



Code	Description
PBPDM14	14 Module (2 x 80A 30mA RCCB Type A) 8 Usable Ways
PBPDM16	16 Module (2 x 80A 30mA RCCB Type A) 10 Usable Ways
PBPDM18	18 Module (2 x 80A 30mA RCCB Type A) 12 Usable Ways
PBPDM20	20 Module (2 x 100A 30mA RCCB Type A) 14 Usable Ways
PBPDM22	22 Module (2 x 100A 30mA RCCB Type A) 16 Usable Ways

Consumer Unit with Mains Switch with SPD - Type 2

- 2P Mains Switch 100A
- 1 x Neutral for use with RCBO Module
- 6kA Rated Short Circuit Capacity
- SPD Type 2
- SPD Protection (32A MCB)
- Label kit
- Grommet Strip
- 2 x Blanking modules supplied per board
- Conforms to BS EN 61439-3
- 3 year Guarantee



Code	Description
PBPM08-SPD	8 Module (100A Mains Switch) SPD Type 2 4 Usable Ways
PBPM10-SPD	10 Module (100A Mains Switch) SPD Type 2 6 Usable Ways
PBPM12-SPD	12 Module (100A Mains Switch) SPD Type 2 8 Usable Ways
PBPM14-SPD	14 Module (100A Mains Switch) SPD Type 2 10 Usable Ways
PBPM16-SPD	16 Module (100A Mains Switch) SPD Type 2 12 Usable Ways
PBPM18-SPD	18 Module (100A Mains Switch) SPD Type 2 14 Usable Ways
PBPM20-SPD	20 Module (100A Mains Switch) SPD Type 2 16 Usable Ways
PBPM22-SPD	22 Module (100A Mains Switch) SPD Type 2 18 Usable Ways

**Suitable for TN -
(TN-S, TN-C,
TN-C-S) and TT**

Consumer Unit Dual RCD with SPD

- 2P Main Switch 100A
- 2 x RCCB 80A (Board sizes 14/16/18)
- 2 x RCCB 100A (Board sizes 20/22)
- 3 x Neutral Bars
- 6kA Rated Short Circuit Capacity
- SPD Type 2
- SPD Protection (32A MCB)
- Label kit
- Grommet Strip
- Conforms to BS EN 61439-3
- 3 year Guarantee



Code	Description
PBPDM14-SPD	14 Module SPD Type 2 (2 x 80A 30mA RCCB Type A 6 Usable Ways)
PBPDM16-SPD	16 Module SPD Type 2 (2 x 80A 30mA RCCB Type A 8 Usable Ways)
PBPDM18-SPD	18 Module SPD Type 2 (2 x 80A 30mA RCCB Type A 10 Usable Ways)
PBPDM20-SPD	20 Module SPD Type 2 (2 x 100A 30mA RCCB Type A 12 Usable Ways)
PBPDM22-SPD	22 Module SPD Type 2 (2 x 100A 30mA RCCB Type A 14 Usable Ways)

Double Bank Consumer Units

The Part Populated Consumer Unit range available in 3 Board layouts with and without SPD - 28 / 36 / 44 module units.

- 2P Mains Switch 100A
- 2 x RCCB 100A
- 3 x Neutral Bars
- 6kA Rated Short Circuit Capacity
- Label kit
- Grommet Strip
- Conforms to BS EN 61439-3
- 3 year Guarantee



Code	Description
PBDS28	28 Module (100A Mains Switch) 25 Usable Ways
PBDS36	36 Module (100A Mains Switch) 33 Usable Ways
PBDS44	44 Module (100A Mains Switch) 41 Usable Ways

**Suitable for TN -
(TN-S, TN-C,
TN-C-S) and TT**

- 2P Mains Switch 100A
- 2 x RCCB 100A
- 3 x Neutral Bars
- 6kA Rated Short Circuit Capacity
- SPD Type 2
- SPD Protection (32A MCB)
- Label kit
- Grommet Strip
- Conforms to BS EN 61439-3

Example only



Code	Description
PBDS28-SPD	28 Module (100A Mains Switch) 23 Usable Ways
PBDS36-SPD	36 Module (100A Mains Switch) 31 Usable Ways
PBDS44-SPD	44 Module (100A Mains Switch) 39 Usable Ways

* Product design may differ from those shown

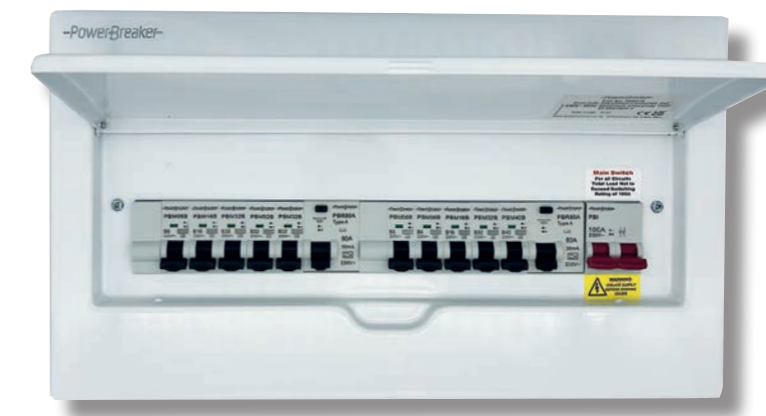
Dual Fully Populated Consumer Units

The Dual Fully Populated Consumer Unit range is available in 5 Board layouts - 14/16/18/20/22 modules.

- 2P Mains Switch 100A
- 2 x RCCB 80A (Board sizes 14/16/18)
- 2 x RCCB 100A (Board sizes 20/22)
- 3 x Neutral bars
- 6kA Rated Short Circuit Capacity
- Blank Modules 18 2 x Blanks
- Modules 20 4 x Blanks
- Modules 22 6 x Blanks
- MCB's - each board supplied with MCB's full details below
- Label kit
- Grommet Strip
- Conforms to BS EN 61439-3
- 3 year Guarantee



Code	Description
PBPD14	14 Module (2 x 80A 30mA RCCB Type A) (8 MCBS, 1 x 40A, 3 x 32A, 1 x 16A, 3 x 6A)
PBPD16	16 Module (2 x 80A 30mA RCCB Type A) (10 MCBS, 1 x 40A, 4 x 32A, 2 x 16A, 3 x 6A)
PBPD18	18 Module (2 x 80A 30mA RCCB Type A) (10 MCBS, 1 x 40A, 4 x 32A, 2 x 16A, 3 x 6A)
PBPD20	20 Module (2 x 100A 30mA RCCB Type A) (10 MCBS, 1 x 40A, 4 x 32A, 2 x 16A, 3 x 6A)
PBPD22	22 Module (2 x 100A 30mA RCCB Type A) (10 MCBS, 1 x 40A, 4 x 32A, 2 x 16A, 3 x 6A)



Dual Consumer Unit with Type 2 SPD

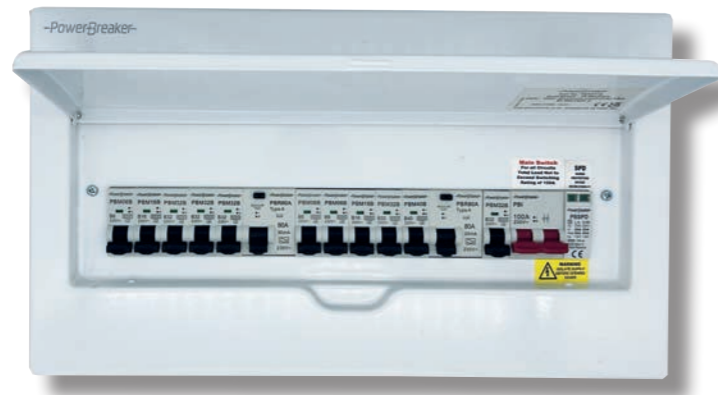
The Dual Consumer Unit range are available in 3 Board layouts
 - 16 modules / 18 modules / 22 modules

- 2P Mains Switch 100A
- 2 x RCCB 80A (Board sizes 16/18)
- 2 x RCCB 100A (Board sizes 22)
- 3 x Neutral Bars
- 6kA Rated Short Circuit Capacity
- SPD Type 2
- SPD Protection (32A MCB)
- MCB's - each board supplied with MCB's full details below
- Label kit
- Grommet Strip
- Conforms to BS EN 61439-3
- 3 year Guarantee



Code	Description
PBPDP16	16 Module, SPD Type T2, (2 x 80A 30mA RCCB Type A) (8 MCB's, 1 X 40A, 3 X 32A, 1 X 16A, 3 X 6A)
PBPDP18	18 Module, SPD Type T2 (2 X 80A 30mA RCCB Type A) (10 MCB's, 1 x 40A, 4 X 32A, 2 X 16A, 3 X 6A)
PBPDP22	22 Module SPD Type T2 (2 X 100A 30mA RCCB TYPE A) (10 MCB's, 1 x 40A, 4 x 32A, 2 x 16A, 3 x 6A 4 Blanking Modules)

**Suitable for TN -
(TN-S, TN-C,
TN-C-S) and TT**



Dual High Integrity Consumer Unit with Type 2 SPD

The Dual High Integrity Consumer Unit range are available in 2 Board layouts
 - 18 modules / 22 modules

- 2P Mains Switch 100A
- 2 x RCCB 100A
- 3 x Neutral Bars
- 6kA Rated Short Circuit Capacity
- SPD Type 2
- SPD Protection (32A MCB) supplied
- MCB's - each board supplied with MCB's full details below
- Spaces for RCBOs
- Blanks: - Modules 18 2 x Blanks
 Modules 22 4 x Blanks
- Label kit
- Grommet Strip
- Conforms to BS EN 61439-3
- 3 year Guarantee



Code	Description
PBPH18	18 Module SPD Type T2 (2 x 100A 30mA RCCB Type A) (8 MCB's, 1 x 40A, 3 x 32A, 1 x 16A, 3 x 6A)
PBPH22	22 Module SPD Type T2 (2 x 100A 30MA RCCB Type A) (10 X MCB's, 1 x 40A, 4 x 32A, 2 x 16A, 3 x 6A)

**Suitable for TN -
(TN-S, TN-C,
TN-C-S) and TT**

Garage Consumer Unit

- RCCB 63A, 30mA
- MCB's details below
- Grommet Strip
- Conforms to BS EN61439-3
- 3 year Guarantee

The PBGU is supplied with 63A RCCB and 2 MCB's 1 x 6A & 1 x 16A



Code	Description
PBGU	Garage Consumer Unit (63A, 30mA RCCB Type A) 1 x 6A & 1 x 16A MCB

Shower Consumer Unit

- RCCB 63A, 30mA
- MCB's details below
- Grommet Strip
- Conforms to BS EN61439-3
- 3 year Guarantee

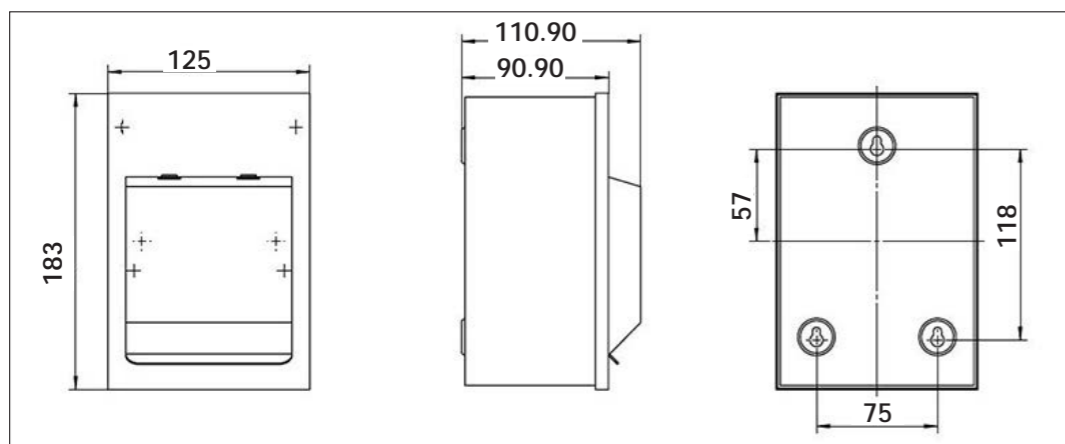
The PBSU is supplied with 63A RCCB and 1 x 50A MCB



Code	Description
PBSU	Shower Consumer Unit (63A, 30mA RCCB Type A) 1 x 50A MCB

Shower & Garage Consumer Unit

For - PBSU & PBGU



EV Charger Unit

- 2 Pole Mains Switch 100A
- 6 Module unit
- 1 Free module
- SPD Type 2
- SPD Protection (32A MCB)
- 1P + N (Switch Neutral) RCBO
- Conforms to BS EN61439-3
- 3 year Guarantee



Code	Description
PB6EV32-SPD	2P 100A Mains Switch, 32A 2 Pole RCBO 30mA Type A SPD Type 2 Blanking Module
PB6EV40-SPD	2P 100A Mains Switch, 40A 2 Pole RCBO 30mA Type A SPD Type 2 Blanking Module

- 2 Pole Mains Switch 100A
- 4 Module Unit
- 1 Free module
- 1P + N (Switch Neutral) RCBO
- Conforms to BS EN61439-3
- 3 year Guarantee

Code	Description
PB4EV32	2P 100A Mains Switch, 32A 2 Pole RCBO 30mA Type A Blanking Module
PB4EV40	2P 100A Mains Switch, 40A 2 Pole RCBO 30mA Type A SPD Blanking Module

RCCB Range

Type A RCD

- Tripping is ensured for residual sinusoidal alternating currents and residual pulsating direct currents, whether suddenly applied or slowly rising.



Pack Quantity	1
Number of Poles	2P (Double Pole)
Rated Voltage	230/240VAC
Rated Residual Current	30mA
Type of Residual Current	Type A
Rated Frequency	50/60Hz
Rated Short-Circuit Capacity	6kA
Index of Protection	IP20
Terminals	1 -35mm ²
Mechanical Endurance	10,000 times
Electrical Endurance	4,000 times
Ambient Temperature	- 25°C to +55°C
Storage Temperature	- 40°C to +70°C
Torque (Recommended minimum tightening)	2.5Nm
Din Rail Mounting	Yes
Guarantee	5 Years
Conforms To	BS EN 61009

Code	Description
PBR63A	63A, 30mA RCCB Type A 2P
PBR80A	80A, 30mA RCCB Type A 2P
PBR100A	100A, 30mA RCCB Type A 2P

MCB - B Curve

Type B Curve -

Type B instantaneous tripping curve is used for the protection of circuits and equipment that have low surge currents

Devices are designed to trip at instantaneous fault currents of 3 - 5 times rated (In). For example a 10A device will trip at 30-50A instantaneous current.

Pack Quantity	12
Number of Poles	1P (Single Pole)
Rated Voltage	230/240VAC
Rated Frequency	50/60Hz
Rated Short-Circuit Capacity	6kA
Tripping Characteristics	Type B
Index of Protection	IP20
Terminals	1 -25mm ²
Mechanical Endurance	10,000 times
Electrical Endurance	4,000 times
Ambient Temperature	- 25°C to +55°C
Storage Temperature	- 40°C to +70°C
Torque (Recommended minimum tightening)	2.0Nm
Din Rail Mounting	Yes
Guarantee	5 Years
Conforms To	BS EN 60898-1



Code	Description
PBM06B	6A B Curve MCB 6kA 1P
PBM10B	10A B Curve MCB 6kA 1P
PBM16B	16A B Curve MCB 6kA 1P
PBM20B	20A B Curve MCB 6kA 1P
PBM32B	32A B Curve MCB 6kA 1P
PBM40B	40A B Curve MCB 6kA 1P
PBM50B	50A B Curve MCB 6kA 1P
PBM63B	62A B Curve MCB 6kA 1P

MCB - C Curve

Type C Curve -

TYPE C instantaneous tripping curve is used for the protection of circuits and equipment that have high surge currents, such as motors.

Devices are designed to trip at fault currents of 5 - 10 times rated (in) for example 10A device will trip instantly at 50 - 100A instantaneous current

Code	Description
PBM06C	6A C Curve MCB 6kA 1P
PBM10C	10A C Curve MCB 6kA 1P
PBM16C	16A C Curve MCB 6kA 1P
PBM20C	20A C Curve MCB 6kA 1P
PBM32C	32A C Curve MCB 6kA 1P
PBM40C	40A C Curve MCB 6kA 1P
PBM50C	50A C Curve MCB 6kA 1P
PBM63C	62A C Curve MCB 6kA 1P

RCBO - B Curve 1P+N

Type A RCD -

A type provides protection against residual AC currents and residual pulsating DC currents whether suddenly applied or slowly increasing

Type B CURVE -

Type B instantaneous tripping curve is used for the protection of circuits and equipment that have low surge currents

Devices are designed to trip at instantaneous fault currents of 3 - 5 times rated (In). For example a 10A device will trip at 30-50A instantaneous current.

Code	Description
PBR06B	6A B RCBO 1P 30mA 6kA Type A
PBR10B	10A B RCBO 1P 30mA 6kA Type A
PBR16B	16A B RCBO 1P 30mA 6kA Type A
PBR20B	20A B RCBO 1P 30mA 6kA Type A
PBR32B	32A B RCBO 1P 30mA 6kA Type A
PBR40B	40A B RCBO 1P 30mA 6kA Type A



RCBO - B Curve 1P+N with Switch Neutral

Code	Description
PBR206B	6A B RCBO 2P 30mA 6kA Type A
PBR210B	10A B RCBO 2P 30mA 6kA Type A
PBR216B	16A B RCBO 2P 30mA 6kA Type A
PBR220B	20A B RCBO 2P 30mA 6kA Type A
PBR232B	32A B RCBO 2P 30mA 6kA Type A
PBR240B	40A B RCBO 2P 30mA 6kA Type A

RCBO - C Curve 1P+N with Switch Neutral

Type C Curve -

Type C instantaneous tripping curve is used for the protection of circuits and equipment that have high surge currents, such as motors

Devices are designed to trip at instantaneous fault currents of 3 - 5 times rated (In). For example a 10A device will trip at 50-100A instantaneous current.

Code	Description
PBR206C	6A C RCBO 2P 30mA 6kA Type A
PBR210C	10A C RCBO 2P 30mA 6kA Type A
PBR216C	16A C RCBO 2P 30mA 6kA Type A
PBR220C	20A C RCBO 2P 30mA 6kA Type A
PBR225C	25A C RCBO 2P 30mA 6kA Type A
PBR232C	32A C RCBO 2P 30mA 6kA Type A
PBR240C	40A C RCBO 2P 30mA 6kA Type A

SPD TYPE 2

- Surge Protection
- Type 2 SPD
- Replacement module Part Code: PBSML
- SPD Kit Part Code: PBSUWK - Includes SPD, 32A MCB, connection wires & labels

This unit is a single module but has L (Live), N (Neutral) & PE (earth connections), it uses an MOV across the Live & Neutral and a gas discharge tube across Earth & Neutral to dissipate any voltage spikes.

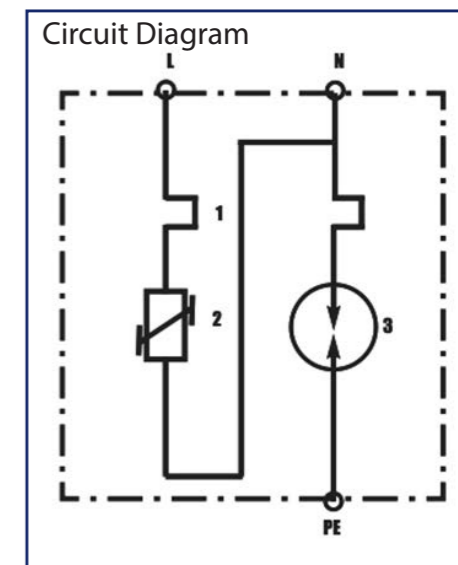


Code	Description
PBSUWK	SPD Kit with Type 2 SPD, 32A MCB, Connection Wires & Label

Description	PBSUWK		PBSMLWW	
	Type 2 SPD		Type 2 SPD - Replacement module	
Pack Quantity	1		1	
Test Class	Type II		Type II	
Terminal Connections	L - N	N - PE	L - N	N - PE
Rated Working Voltage of Uo (v)	230V~50Hz		230V~50Hz	
Max. Discharge Current Imax 8/20µs	40kA		40kA	
Nominal Discharge Current In 8/20µs	20kA		20kA	
Max. Continuous Operation Voltage Uc	275V	255V	275V	255V
Voltage Protection Level Up	1.5kV		1.5kV	
Short Circuit Current Rating Isccr	500A		500A	
Protection Type	MOV	Gas Discharge Tube	MOV	Gas Discharge Tube
Wiring Capacity	L/N, PE 6mm ²			
Number of Poles	2		2	
Protection Class	IP20		IP20	
Status Indicator	Green - Normal Red - Failure		Green - Normal Red - Failure	
Mounting	35mm Din Rail		Push fit cartridge	
Casing Material	Thermal Plastic UL94V-0		Thermal Plastic UL94V-0	
Dimensions	L81.6 x W18 x D68.5mm		L46.3x W18 x D49.15mm	
Guarantee	3 Years		3 Years	
Conforms To	EN 61643-11		EN 61643-11	



Suitable for TN - (TN-S, TN-C, TN-C-S) and TT



What are arc faults and what causes them?

An arc fault is an unintentional arcing condition in a circuit. Arcing creates high intensity heating at the point of the arc resulting in burning particles that may over time ignite surrounding material. Repeated arcing can create carbon paths that are the foundation for continued arcing, generating even higher temperatures. The temperatures of these arcs can exceed 6000 °C.

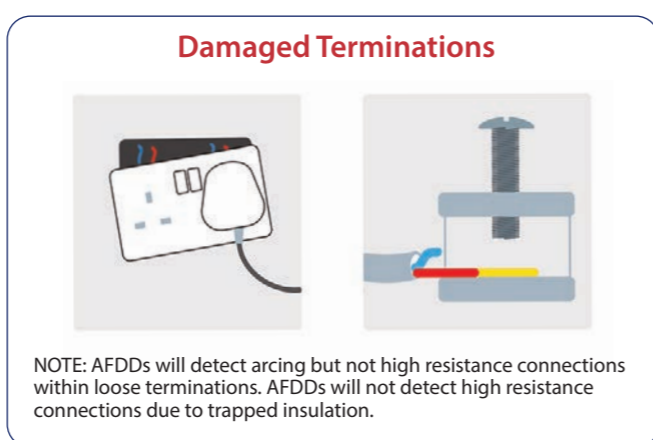
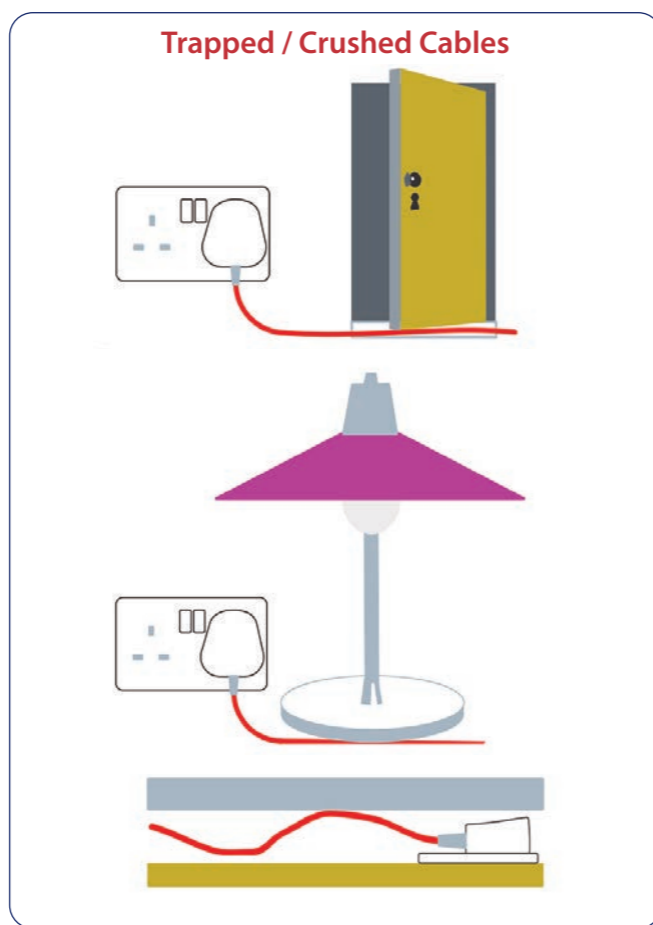
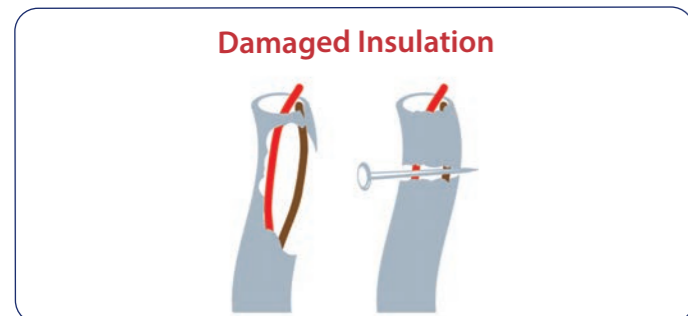
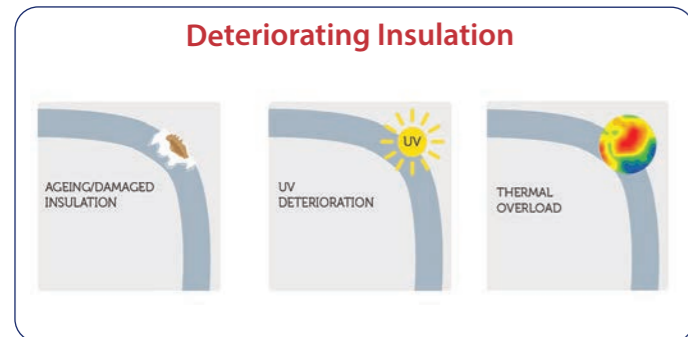
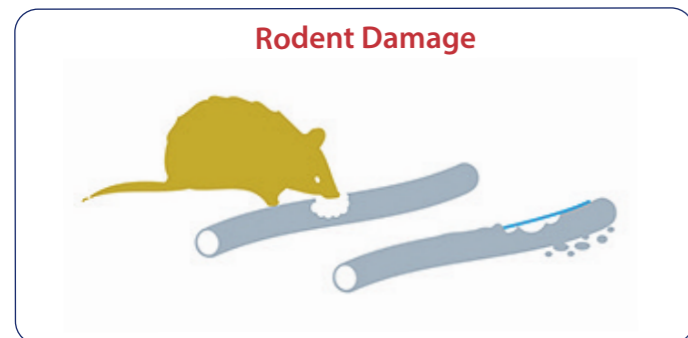
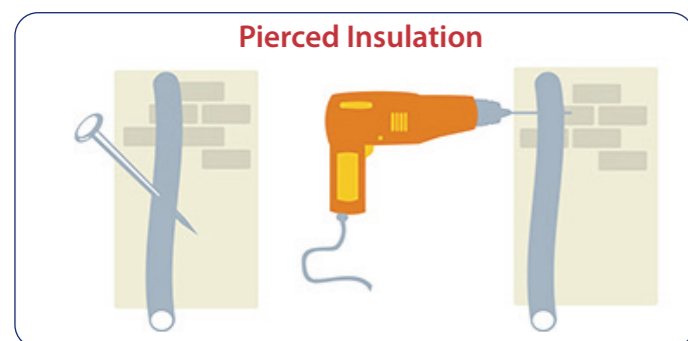
Development of an arc fault

Arc faults are rarely instant and, depending on a wide number of factors, can take time to develop. The time for an arc fault to form is dependent on its root cause (external influences, ageing, etc.).

Arc faults can occur immediately or over a long period (hours, days, weeks, months, years). With the arc developing, temperatures up to 6000°C can be generated and thus the surrounding insulation starts to burn and eventually a fire develops.



Arc faults can occur in any locations where electrical energy is present with varied root causes, for example:-



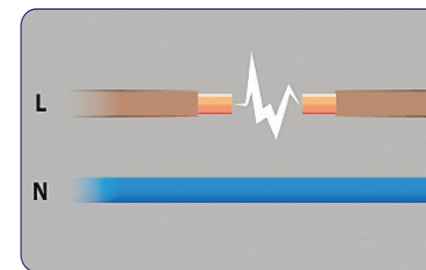
NOTE: AFDDs will detect arcing but not high resistance connections within loose terminations. AFDDs will not detect high resistance connections due to trapped insulation.

Types of Arc Fault protected by AFDDs

Originates from

- Damaged cables (e.g. crushed, broken)
- Loose connections

A) A series arc is in series with a load and at a lower level than a parallel arc. The series arc fault characteristics result in the rms value of current of current and I^2t being too low to operate a fuse or MCB.



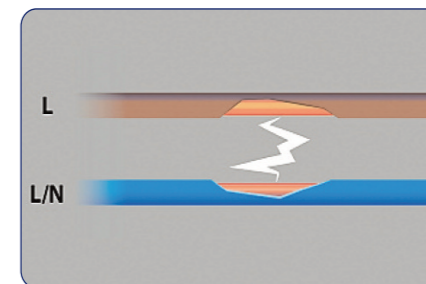
Protection is provided by AFDDs.

B) Parallel arc fault current (L-N)

Originates from:

- Fault between L-N
- High impedance due to damaged insulation, fault current is too low to trip other protection devices

Parallel arc fault characteristics (including short duration high peak currents) result in rms, I^2t , and peak times values that are generally too low to operate protective devices such as fuses or MCBs.

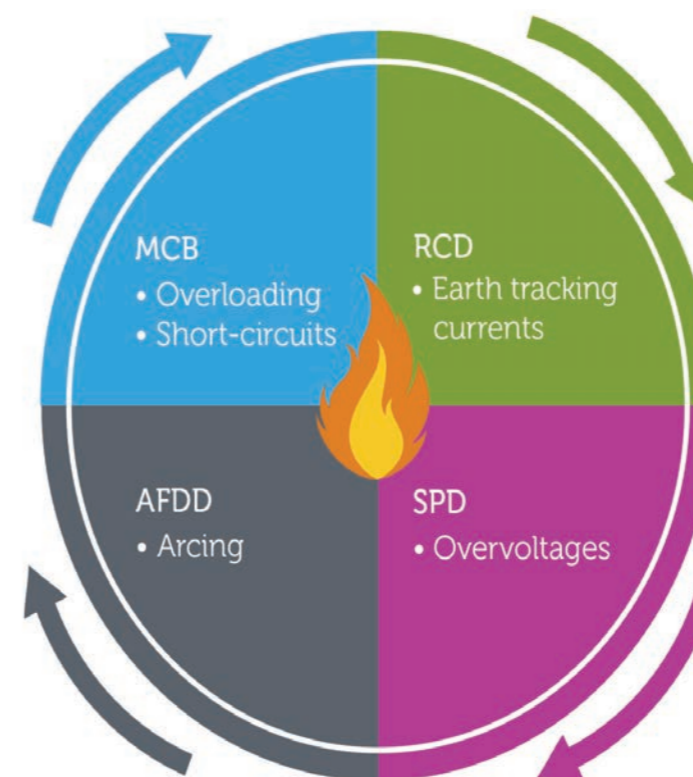
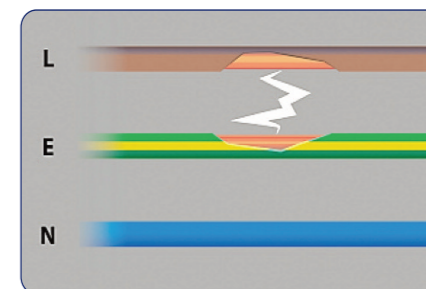


Protection is provided by AFDDs.

C) Parallel arc fault current (L-E)

Originates from:

- Fault between L-E
- High impedance due to damaged insulation, fault current is too low to operate circuit breakers or fuses



The IET wiring Regulations state the following:-

Arc Fault detection devices conforming to BS EN 62606 shall be provided for single-phase AC final circuits supplying socket-outlets with a rated current not exceeding 32A.

For all other premises, the use of AFDDs conforming to BS EN 62606 is recommended for single phase AC final circuits supplying socket-outlets not exceeding 32A in

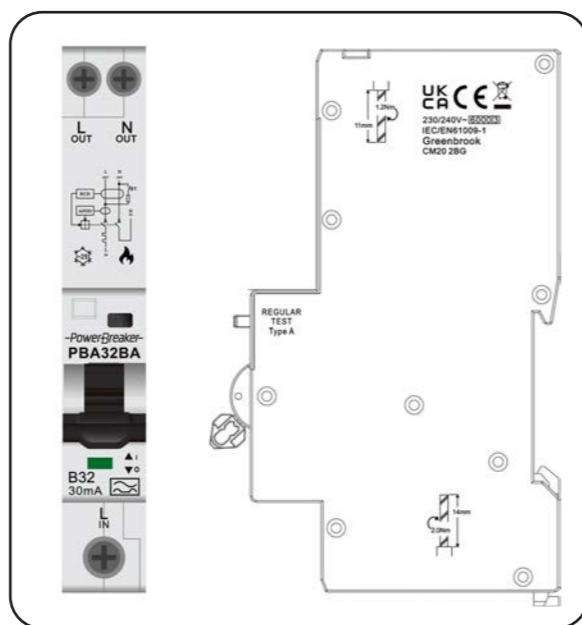
- Higher Risk residential buildings (HRRB)
- Houses in Multiple Occupations (HMOs)
- Purpose built student accommodation
- Care homes

Arc Fault Detection Device with 30mA Type A RCBO instantaneous tripping Curve B

The PowerBreaker range of circuit protection devices are designed and tested for use with PowerBreaker Consumer Units.

Type A RCD - A type provides protection against residual AC currents and residual pulsating DC currents whether suddenly applied or slowly increasing

- Rated Short Circuit Capacity 6kA
- 1 Pole RCBO + Switch Neutral
- Operational Characteristics Type A, 30mA
- Instantaneous Tripping B Curve

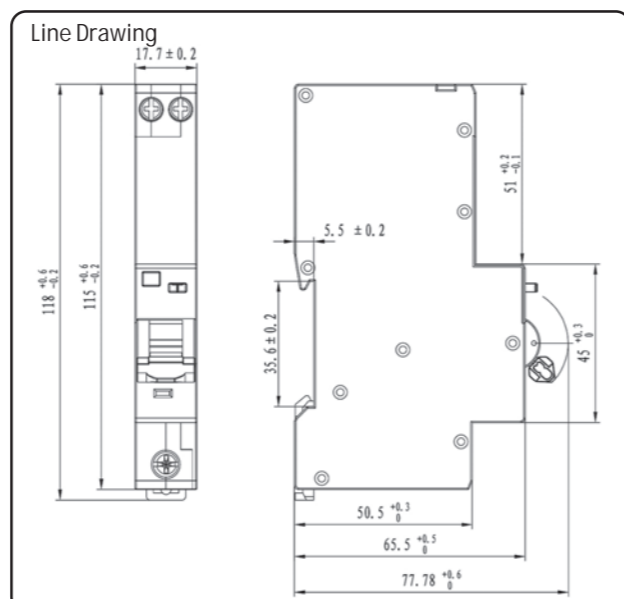


Code	Description
PBA06BA	6A Arc fault detection device with 30mA Type A RCBO instantaneous tripping curve B
PBA10BA	10A Arc fault detection device with 30mA Type A RCBO instantaneous tripping curve B
PBA16BA	16A Arc fault detection device with 30mA Type A RCBO instantaneous tripping curve B
PBA20BA	20A Arc fault detection device with 30mA Type A RCBO instantaneous tripping curve B
PBA25BA	25A Arc fault detection device with 30mA Type A RCBO instantaneous tripping curve B
PBA32BA	32A Arc fault detection device with 30mA Type A RCBO instantaneous tripping curve B
PBA40BA	40A Arc fault detection device with 30mA Type A RCBO instantaneous tripping curve B

Type B Curve - Type B instantaneous tripping curve is used for the protection of circuits and equipment that have low surge currents. Devices are designed to trip at instantaneous fault currents of 3 - 5 times rated (In). For example a 10A device will trip at 30-50A instantaneous current.

Type B curve is used for the protection of circuits with equipment that have Low surge currents.

Protection Area	
Fault Type	Detected by Integrated
Short Circuit	MCB
Overload	MCB
Residual Current	RCD
Series Arcing Fault	AFD
Parallel Arcing Fault	AFD
Parallel Arcing Fault to PE	RCD
Over Voltage	AFD



NOTE: These devices **MUST** be installed by a qualified electrician in accordance with the latest wiring regulations (BS7671).

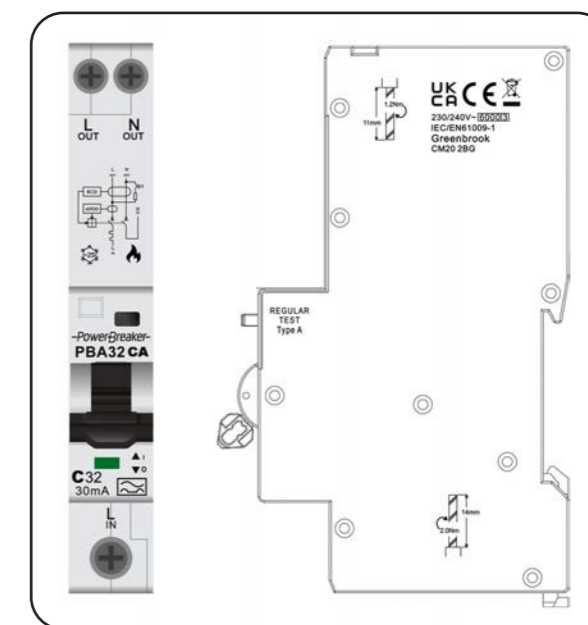
Arc Fault Detection Device Range - Type C Curve

The PowerBreaker range of circuit protection devices are designed and tested for use with PowerBreaker Consumer Units.

Type A RCD - A type provides protection against residual AC currents and residual pulsating DC currents whether suddenly applied or slowly increasing

- Rated Short Circuit Capacity 6kA
- 1 Pole RCBO + Switch Neutral
- Operational Characteristics Type A, 30mA
- Instantaneous Tripping C Curve

Code	Description
PBA06CA	6A Arc fault detection device with 30mA Type A RCBO instantaneous tripping curve C
PBA10CA	10A Arc fault detection device with 30mA Type A RCBO instantaneous tripping curve C
PBA16CA	16A Arc fault detection device with 30mA Type A RCBO instantaneous tripping curve C
PBA20CA	20A Arc fault detection device with 30mA Type A RCBO instantaneous tripping curve C
PBA25CA	25A Arc fault detection device with 30mA Type A RCBO instantaneous tripping curve C
PBA32CA	32A Arc fault detection device with 30mA Type A RCBO instantaneous tripping curve C
PBA40CA	40A Arc fault detection device with 30mA Type A RCBO instantaneous tripping curve C

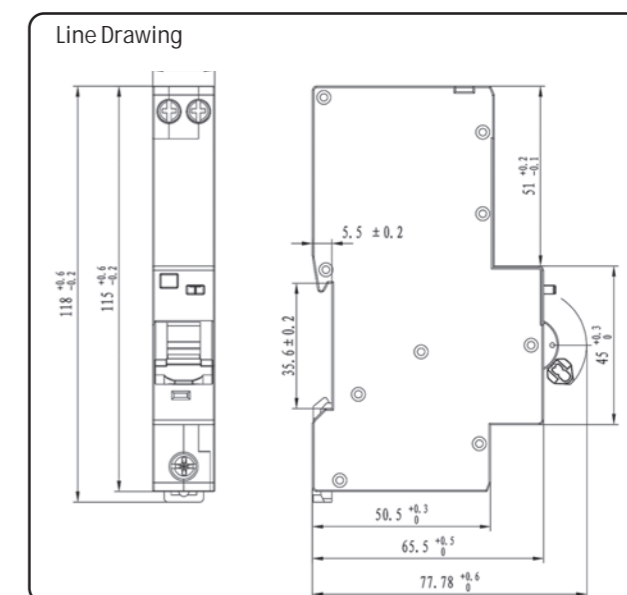


Type C Curve - Type C instantaneous tripping curve is used for the protection of circuits and equipment that have high surge currents, such as motors

Devices are designed to trip at instantaneous fault currents of 3 - 5 times rated (In). For example a 10A device will trip at 50-100A instantaneous current

Protection Area	
Fault Type	Detected by Integrated
Short Circuit	MCB
Overload	MCB
Residual Current	RCD
Series Arcing Fault	AFD
Parallel Arcing Fault	AFD
Parallel Arcing Fault to PE	RCD
Over Voltage	AFD

NOTE: These devices **MUST** be installed by a qualified electrician in accordance with the latest wiring regulations (BS7671).



Contactor

Contactors are electromechanically controlled switches used to control high-power loads using a low-power input. These Contactors are frequently used to switch, heaters, fans, lights and pumps.

Code	Description
PBCON20A	20A, 2P, 230V
PBCON40A	40A, 2P, 230V



Digital DIN Rail Timer Clock



Din rail mount 7 Day Programmable timer with Digital Display. 16 Amp rated with change-over contacts

- 7 Day Programmable with Digital Display Time Switch
- 16A

Code	Description
PBDTC	16A, Digital Time Switch

Mains Isolator Switch

- Rated Short Circuit Capacity 6kA
- 100A
- Double Pole



	PBI
Rated Residual Current	100A
Pack Quantity	6
Number of Poles	2P (Double Pole)
Rated Voltage	230/240VAC
Rated Frequency	50/60Hz
Terminal Capacity	1 – 35mm ²
Mechanical Endurance	10,000 times
Electrical Endurance	4,000 times
Ambient Temperature	- 25°C to +55°C
Storage Temperature	- 40°C to +70°C
Torque (Recommended minimum tightening)	2.5Nm
Din Rail Mounting	Yes
Guarantee	3 Years
Conforms To	BS EN 60947

Accessories

Cable Clamp

Code	Description
PBCC	Cable Clamp

Module Busbar

Code	Description
PBB8	8 Module Busbar
PBB12	12 Module Busbar
PBB16	16 Module Busbar
PBB21	21 Module Busbar

Blank Module

Code	Description
PBMBB	Blank Module

Oval Module Knock Out

Code	Description
PBOMKO	Oval Module Knock Out

Bell Transformer

Code	Description
PBBT	Bell Transformer - 4/8/12 VOLTS

Tail Glands 32mm

Code	Description
PBTG32	32mm Tail Gland

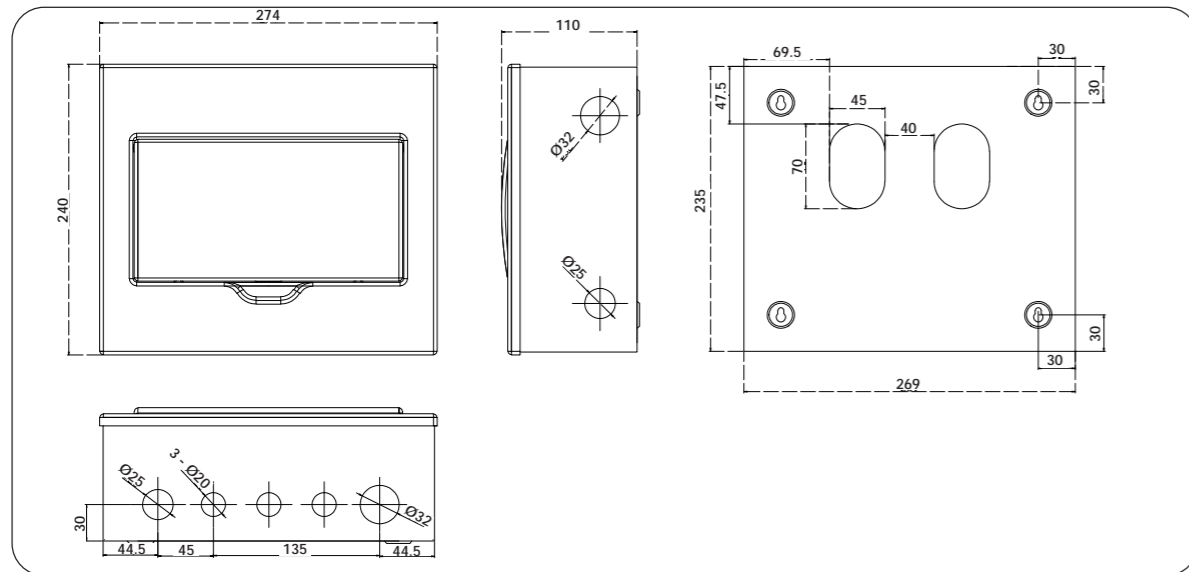


Our tail glands meet current regulations for metal consumer units. The tail kit design allows meter tails and the earth wire to enter the consumer unit to be installed through one insert. They provide the required cable retention and help to maintain the appropriate fire integrity of the consumer unit. They also provide anti vibration protection, are easy to assemble and are halogen free.

Dimensions

8 - 10 Way Dimensions

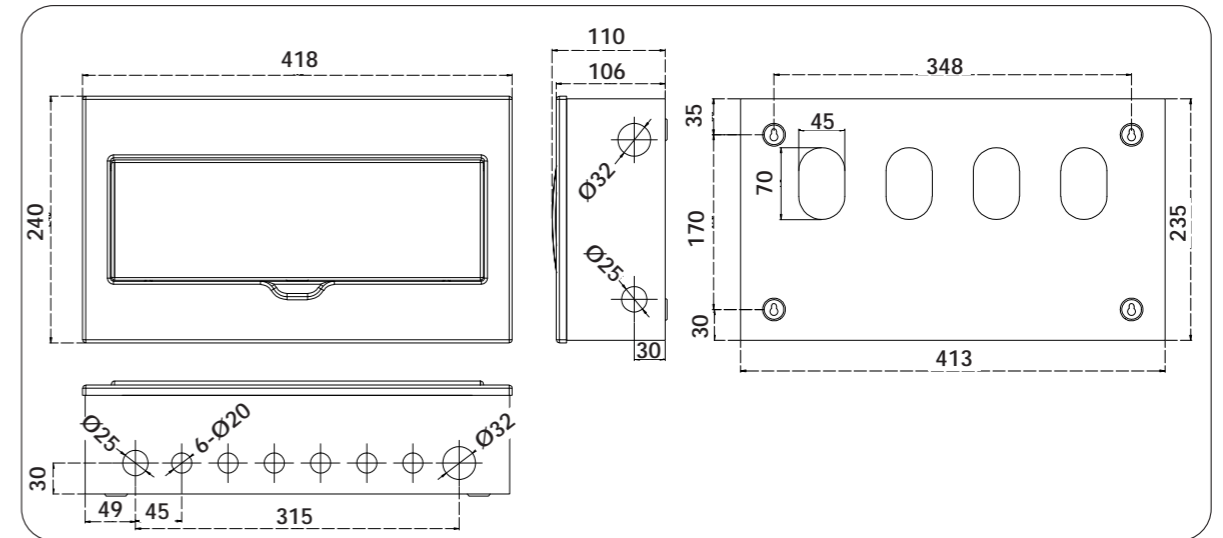
For Consumer Unit - PBPM08 & PBPM10 / PBPM08-SPD & PBPM10-SPD



Dimensions

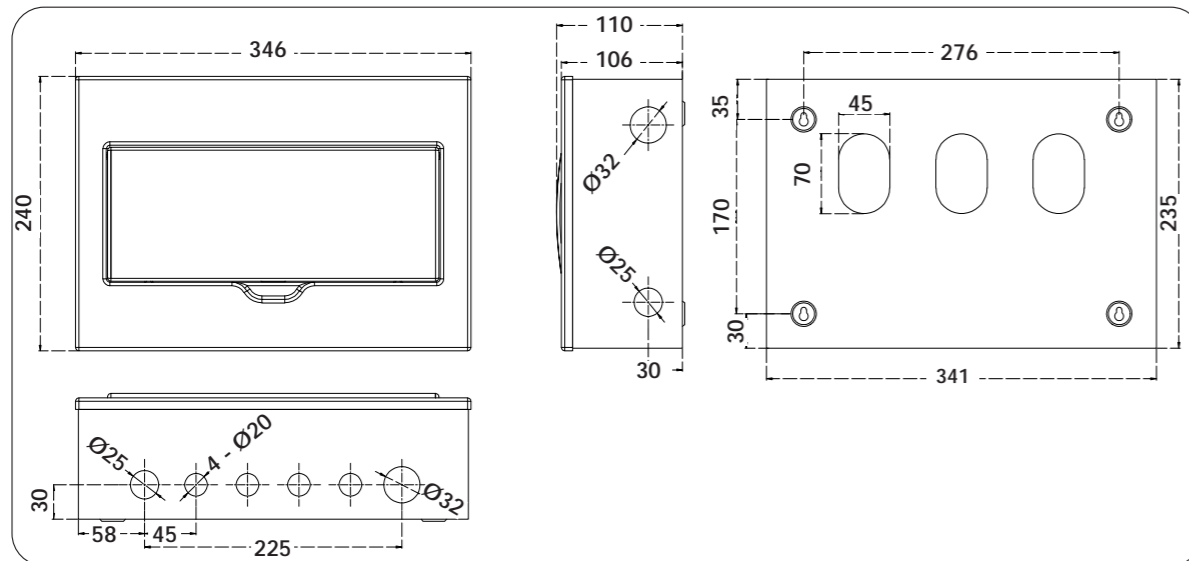
16 - 18 Way Dimensions

For consumer Units - PBPD16 / PBPD18 / PBPDM16 / PBPDM18 / PBPDM16-SPD / PBPDM18-SPD / PBPM16 / PBPM18 / PBPDP16 / PBPDP18 / PBPM16-SPD / PBPM18-SPD / PBPDP16 / PBPDP18



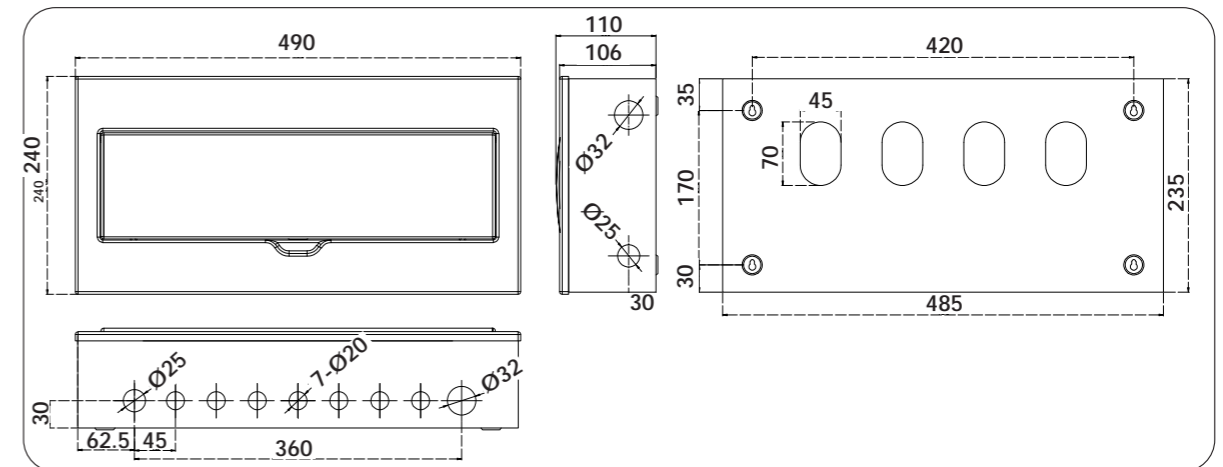
12 - 14 Way Dimensions

For consumer Unit - PBPD12 / PBPD14 / PBPM12 / PBPM14 / PBPM12-SPD / PBPM14-SPD



20 - 22 Way Dimensions

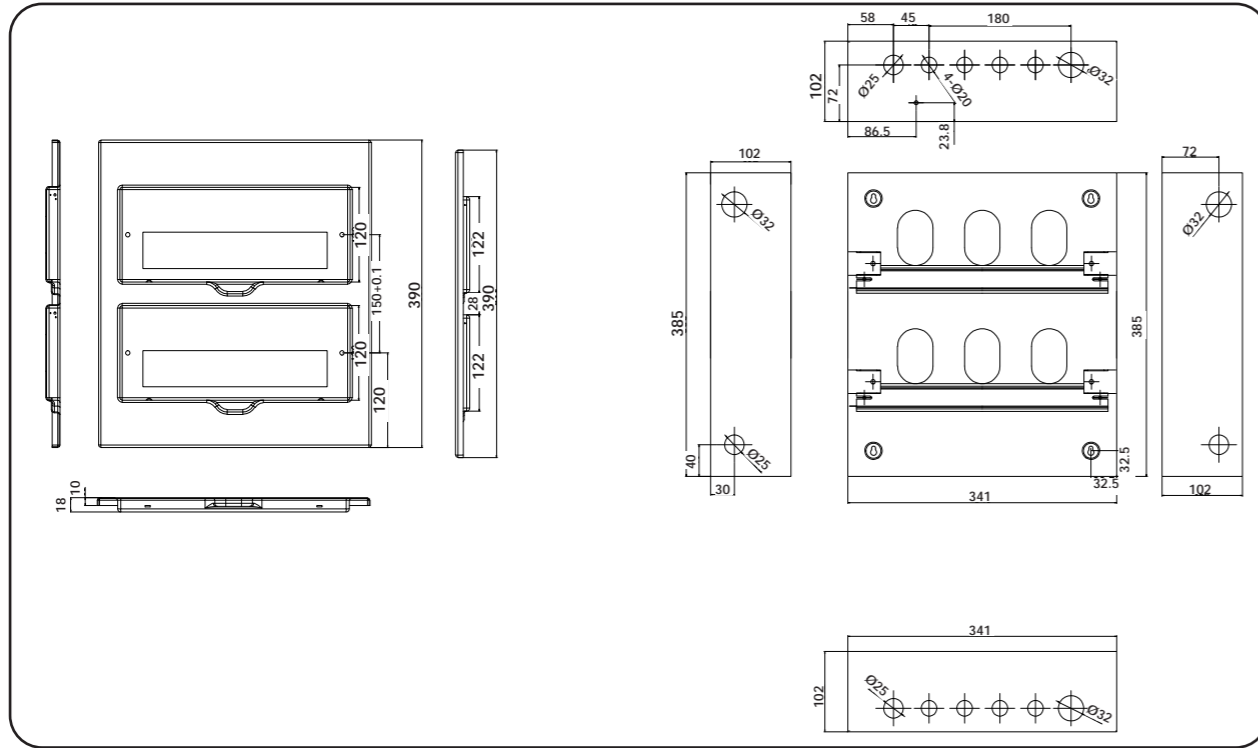
For consumer Unit - PBPD20 / PBPD22 / PBPDM20 / PBPDM22 / PBPDM20-SPD / PBPDM22-SPD / PBPM20 / PBPM22 / PBPDP22 / PBPH18 / PBPH22 / PBPM20-SPD / PBPM22-SPD



Dimensions

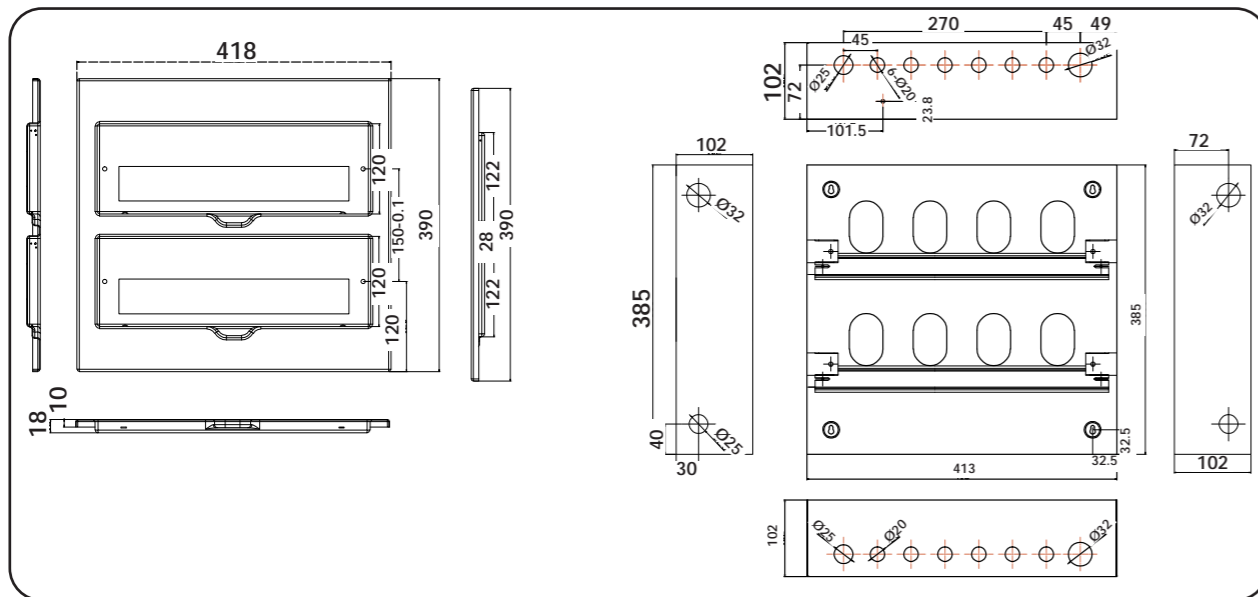
20 - 28 Way Dimensions

For consumer Units - PBDS28 / PBDS28-SPD



32 - 36 Way Dimensions

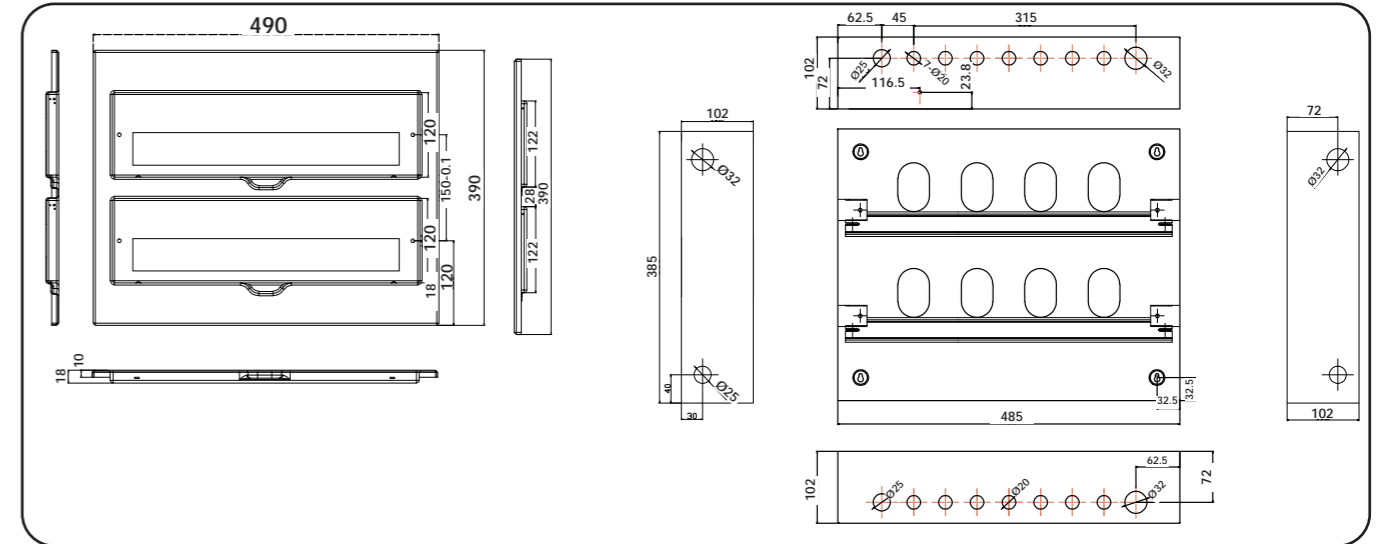
For consumer Units - PBDS36 / PBDS36-SPD



Dimensions

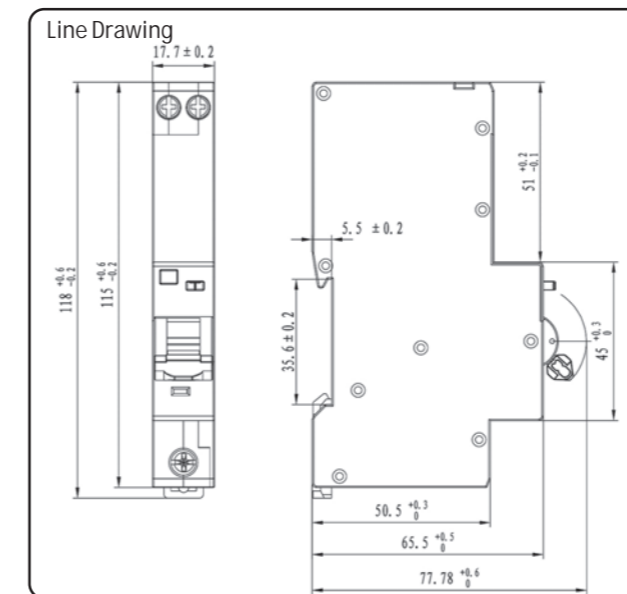
40 - 44 Way Dimensions

For consumer Units - PBDS44 / PBDS44-SPD



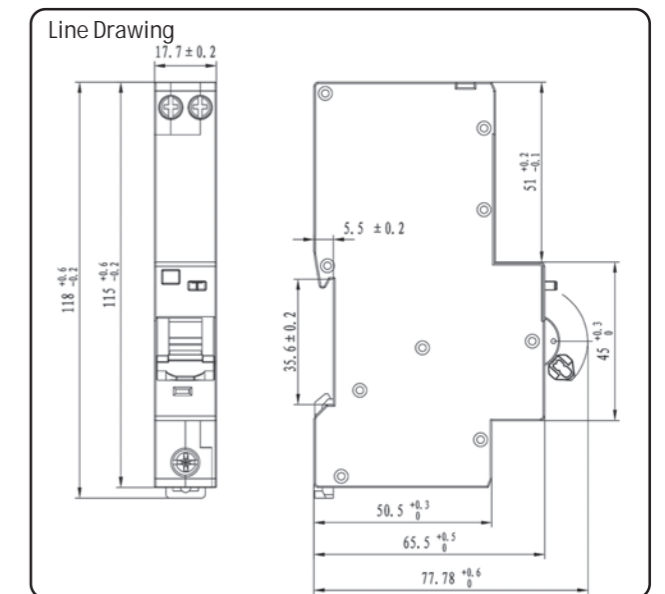
B Curve

PBA06BA, PBA10BA, PBA16BA, PBA20BA, PBA25BA, PBA32BA, PBA40BA



C Curve

PBA06CA, PBA10CA, PBA16CA, PBA20CA, PBA25CA, PBA32CA, PBA40CA



-PowerBreaker-

Type A Socket RCDs
Typically Trip at
>10mS



Quality Socket RCD Solutions

PowerBreaker RCDs typically trip at least 30 milliseconds **faster** than the BSEN standards require.

Standard BS7288-2016 requires Type A RCDs.

Type A RCDs detect DC pulsating currents and surge faults that a Type AC RCD may not detect.

DC Pulsating currents can be created by faults in modern equipment

- EV car chargers
- Solar panels
- Multi media systems
- Smart Speakers
- USB Sockets
- Phone chargers

It suggests that using RCDs to isolate at the point of use avoids more nuisance up stream tripping - leading to power loss of an entire circuit ring and not just on the problem item.

The 18th Edition Wiring Regulations suggest the use of socket RCDs in all public areas in addition to those in the Consumer Unit.

It is also noted that separate socket RCDs offer better fire protection than solely relying on the circuit board.

The new standard demands products that can withstand more rigorous testing (High Voltage & Short Circuit Tests).

Safer defence against electrocution

Clear Flag indicators (Red = on, Green = off/safe)

-PowerBreaker- ... trusted safety

Socket RCD Solutions to rely on

The PowerBreaker commitment to quality and safety ensures our products demonstrate exceptional performance and reliability in demanding environments.

We have constantly exceeded the expectations of our customers earning their continued loyalty.

PowerBreaker SRCD products are specified by the London Underground on the Cross Rail projects with LUL approvals moving towards the carbon reduction programme for 2050.

Within this range we offer a selection of 10mA sockets which function with even more sensitivity than our 30mA - these are ideal for use with hospital equipment or equally important installations.

Our products are "passive" or mechanically latched which means they do not need to be reset after a power loss and will resume normal operation upon the return of power.



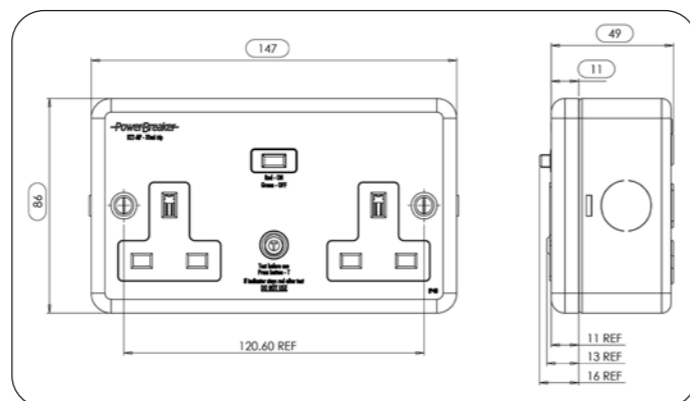
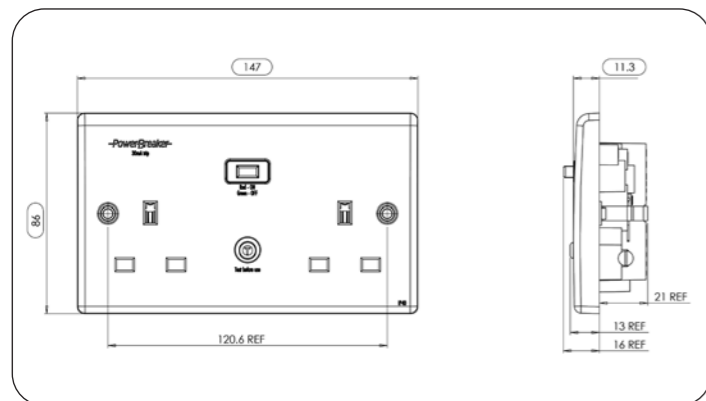
RCD Unswitched Sockets - 30mA Passive - Type A RCDs

- Mechanically latched (does not need resetting after a power loss)
- Red & Green dual flag system to show power on/off
- High intensity LED power on indicator

Part No	Description
H22-WP	RCD Twin Socket Slim profile Scratch resistant urea front plate Fits standard 35mm back box
H22-MP	RCD Twin Socket Complete with metal backbox



TECHNICAL INFORMATION	
Voltage	230V AC ~ 50Hz
Max Operating current	13A (13A Inductive)
Typical Trip Speed	Less than 20mS (typical)
RCD contact break	Double Pole
	IP40
Rated Short-circuit breaking & making Capacity	250A
Rated conditional Short-circuit current	1500A Power factor Range .93 to .98
Independently tested to	BS 7288:2016, BS 1363-2:2016 BS1363-4:2016 (Fused Connection Unit)



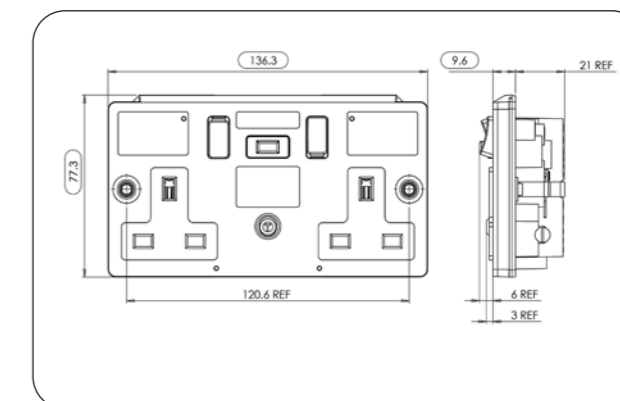
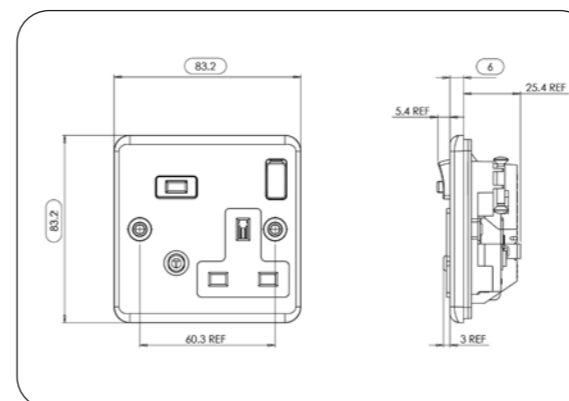
RCD Sockets - Switched Panel Mounting 30mA Passive - Type A RCDs

- Mechanically latched (does not need resetting after a power loss)
- Red & Green dual flag system to show power on/off
- High intensity LED power on indicator

Part No	Description
K21S-WP	Panel Mounting RCD Single Switched Socket Moulded front plate Max Plate Thickness 2mm
K22S-WP	Panel Mounting RCD Twin Switched Socket Moulded front plate Twin earth terminals Max Plate Thickness 2mm



TECHNICAL INFORMATION	
Voltage	230V AC ~ 50Hz
Max Operating current	13A (13A Inductive)
Typical Trip Speed	Less than 20mS (typical)
RCD contact break	Double Pole
Degree of Protection	IP40
Rated Short-circuit breaking & making Capacity	250A
Rated conditional Short-circuit current	1500A Power factor Range .93 to .98
Independently tested to	BS 7288:2016, BS 1363-2:2016 BS1363-4:2016 (Fused Connection Unit)



RCD Switched Sockets - 30mA & 10mA Passive - Type A RCDs

- Mechanically latched (does not need resetting after a power loss)
- Red & Green dual flag system to show power on/off

Part No	Description
K21-WP	RCD Single Switched Socket, Slim profile Moulded front plate Fits standard 35mm back box
K22-WP	RCD Twin Switched Socket, slim profile Moulded front plate Fits standard 35mm back box
K21-MP	RCD Single Switched Socket Complete with metal backbox
K22-MP	RCD Twin Switched Socket Complete with metal back box

Part No	Description - 10mA Super Sensitive
K21-WP10	RCD Single Switched Socket, Slim profile Moulded front plate, Fits standard 35mm back box
K22-WP10	RCD Twin Switched Socket, Slim profile Moulded front plate, Fits standard 35mm back box
K21-MP10	RCD Single Switched Socket, Complete with metal back box
K22-MP10	RCD Twin Switched Socket, Complete with metal back box

TECHNICAL INFORMATION	
Voltage	230V AC ~ 50Hz
Max Operating current	13A (13A Inductive)
Typical Trip Speed	Less than 20mS (typical)
RCD contact break	Double Pole
Degree of Protection	IP40
Rated Short-circuit breaking & making Capacity	250A
Rated conditional Short-circuit current	1500A Power factor Range .93 to .98
Independently tested to	BS 7288:2016, BS 1363-2:2016, BS1363-4:2016 (Fused Connection Unit)



RCD Fused Connection Units - 30mA & 10mA Passive - Type A RCDs

- Mechanically latched (does not need resetting after a power loss)
- Red & Green dual flag system to show power on/off
- Fused for all fixed electrical appliances
- Cuts the power for added protection against electrocution

Part No	Description
H92-WP	RCD Fused Connection Unit Scratch resistant urea front plate Fits 35mm standard back box
H92-MP	RCD Fused Connection Unit Complete with metal back box

Part No	Description - 10mA Super Sensitive
H92-WP10	RCD Fused Connection Unit Scratch resistant urea front plate Fits 35mm standard back box
H92-MP10	RCD Fused Connection Unit Complete with metal back box

TECHNICAL INFORMATION	
Voltage	230V AC ~ 50Hz
Max Operating current	13A (13A Inductive)
Typical Trip Speed	Less than 20mS (typical)
RCD contact break	Double Pole
Degree of Protection	IP40
Rated Short-circuit breaking & making Capacity	250A
Rated conditional Short-circuit current	1500A Power factor Range .93 to .98
Independently tested to	BS 7288:2016, BS 1363-2:2016 BS1363-4:2016 (Fused Connection Unit)



H92-MP



H92-WP

**RCD In-Line - 30mA
Active**

- Suitable for BS/European power supply systems
- Robust construction
- Mechanical flag to indicate contact position
- Double Pole breaking
- Separate test and reset button

TECHNICAL INFORMATION	
Rated Trip Current	30mA
Typical Trip Speed	<40mS
RCD contact break	Double Pole
Latching	Electrical - Needs resetting after power loss (Active)
Conforms to	IEC 61540

Part No	Description
J62-T	In-Line RCD Heavy Duty, IP65 Re-wirable terminals 240V AC 50/60Hz Max operating current 16A
J62-Y	In-Line RCD Heavy Duty, IP65 Re-wirable terminals 110V AV 50/60Hz Max operating current 16A
J63-X	In-Line RCD with IEC Lead Indoor use only, IP20 Fully portable 240V AC 50Hz Max operating current 10A



**13A Twin Socket- IP66
Passive**

- Weatherproof to IP66 even with plug inserted and lid closed
- Can be used for long term projects in all weather conditions
- Uses PowerBreaker technology
- Extra fast trip action - cuts the power in less than 20mS
- High intensity LED power-on-indicator
- 13A Socket (13A Inductive), Rated Trip Current 30mA
- Twin earth terminals
- 20mm Knock outs
- 5 Year Guarantee

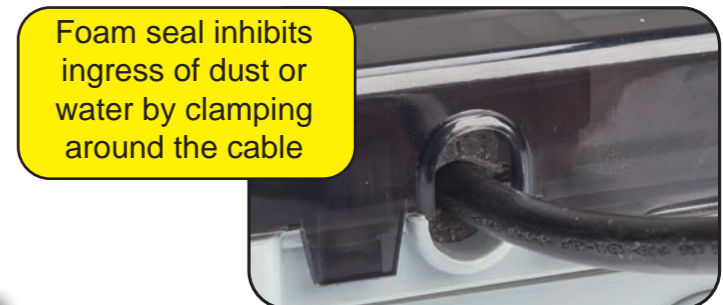
Passive RCD does not need resetting after power failure

TECHNICAL INFORMATION	
Voltage	230V AC ~ 50Hz
Maximum operating current	13A (13A inductive)
Rated Trip Current	30mA
Trip Speed	Less than 20mS (typical)
RCD Contact break	Double pole
Electrical latching	Passive
Independently tested to	BS 7288:2016, BS 1363-2:2016
Box Conforms to	IEC 60670-1 & IEC 60670-22

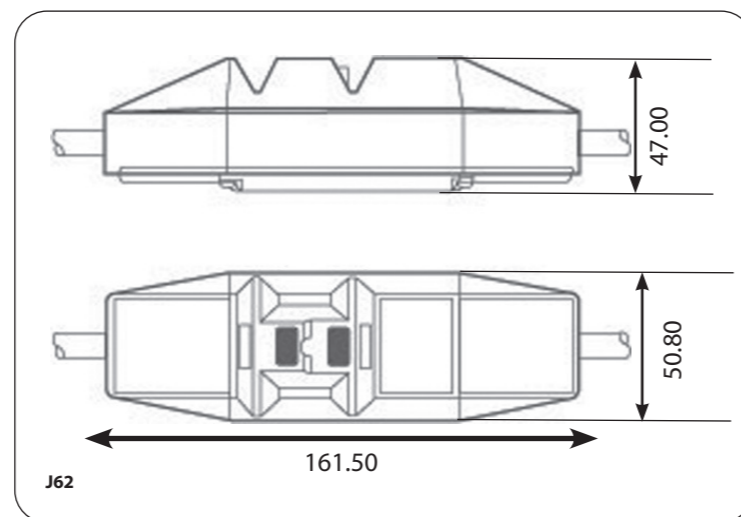


Part No	Description
PSKTRCDP2G	Weatherproof Twin RCD Socket - Passive W195 x H149 x D80mm

-PowerBreaker-
Technology



Foam seal inhibits ingress of dust or water by clamping around the cable



Part No	Description
PSPRCD1G	Weatherproof RCD Fused Spur

-PowerBreaker-



Sales Tel. 01279 772 772
Email. sales@greenbrook.co.uk
Web. www.greenbrook.co.uk

